ITRONIX®	TECHNICAL NOTE	Number	558
	DATE: 6-Sep-00	Issue	1

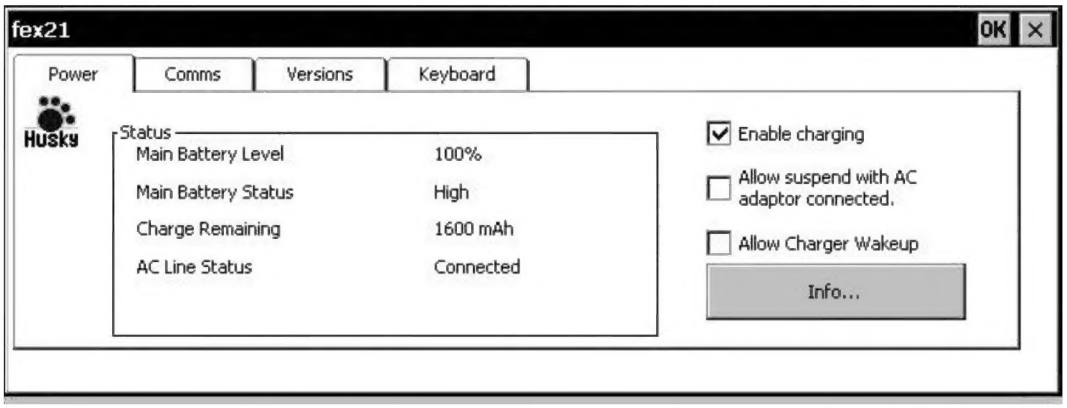
TITLE:	**User Guide to fex21 Charging and Battery Management**
ABSTRACT:	Overview of the fex21 charging system and battery management

Introduction
This document is intended as a basic overview of the fex21 charging system and battery management.

LED Indicator
The fex21 incorporates a battery-charging indicator situated behind the clear Perspex window located at the front/base of the unit. This red LED indicates the state of charging in the following ways:

- **LED off:** AC Adapter not connected or AC adapter not switched on
- **LED On:** The unit is running on AC adapter power.
- **Slow regular flashing (once per second):** The unit is running on AC power and the battery is charging.
- **Fast irregular flashing:** Charging has failed.

fex21 Util Applet
The fex21 Util applet (accessible from the control panel) is a vital source of battery and power information for the device. The following passages describe the information contained within this applet.



- **"Main battery level"** displays the current percentage remaining within the power cell.
  Please note that if the unit has recently been charged to 100% charging will not restart until the gas gauge value has gone below 96% or for 24 hours after last charge.
- **"Main Battery Status"** indicates the battery is in one of the following states
  High Your battery should not need charging for the next few hours.
  Low You should consider changing or re-charging the battery within the next hour
  Critical You should change or recharge the battery immediately
  Charging The battery is currently on charge
  No Battery No battery inserted.
- **"Charge Remaining"** indicates the amount of power left in the battery in mAh.
- **"AC Line Status"** indicates whether the unit is connected to a mains power supply.
- The user can enable or disable charging by use of the **"Enable Charging"** checkbox.
- By checking the **"Allow Suspend with AC Adapter Connected"** option the user will be able to suspend the device regardless of the AC line status. ***Note however that the unit must be powered on in order to charge.***

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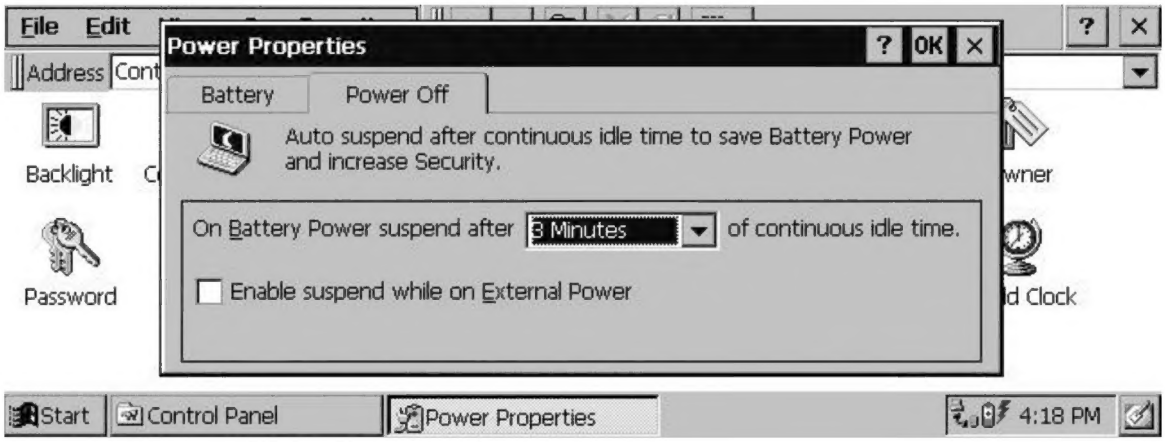
- Checking the **"Allow Charger Wakeup"** option the fex21 will resume from a suspend state immediately on charger insertion. *This option was only included on later revision units and may not be available on all systems.*
- When **"Allow Suspend With AC Adapter Connected"** is checked the user must ensure the following.
- From the Control Panel the 'Power Properties' window should be opened and the **"Enable Suspend While On External Power"** box should not be checked.



****IMPORTANT NOTES****

Charging Requirements

- After using the fex21 the battery should always be charged to 100% in order to maintain an accurate power percentage reading.
- The battery will not charge in extreme temperatures. Charging will only occur between 1ºC and 40ºC.
- If the unit is to be stored for an extended period of time the device must be recharged every 30 days. After 30 days the integrity of the data stored and any application loaded onto the fex21 cannot be guaranteed. In the event of total power loss any application software will need to be re-installed.

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